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Perceived Abuse and Neglect as Risk Factors for Suicidal Behavior in Adolescent Inpatients

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The aim of this study was to assess relative risk of histories of different types of abuse (sexual, physical, and emotional) and neglect (physical and emotional) for suicidal behavior (attempts, ideation, and self-mutilation) in psychiatrically hospitalized adolescents. Seventy-one adolescent inpatients (34 boys, 37 girls) completed self-report measures of abuse and neglect, current suicidal ideation, and lifetime suicide and self-mutilation attempts. The prevalence of sexual and physical abuse was 37.5% and 43.7%, respectively, with 31.3% and 61% of youngsters reporting emotional and physical neglect. Fifty-one percent of youngsters had made suicide attempts, and 39% had self-mutilated. Suicide attempters were significantly more likely to be female, Latino, to report sexual, physical, and emotional abuse, and to endorse emotional neglect. In multivariate analyses, female gender, sexual abuse, and emotional neglect remained significant predictors of self-mutilation and suicidal ideation. Female gender and sexual abuse remained significant predictors of suicide attempts. These findings suggest that emotional neglect is an important and deleterious component of maltreatment experiences and may be a more powerful predictor of suicidal behavior in hospitalized adolescents than physical abuse, emotional abuse, and physical neglect.

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Suicidal behavior, including attempts, gestures, and ideation, with and without a plan, constitutes a major source of morbidity among adolescents. Lifetime prevalence rates of suicidal attempts among high school students range from 3.5% (Andrews and Lewinsohn, 1992) to 11% (Harkavy-Friedman et al., 1987), and in a survey of 9th to 12th graders, 27% of adolescents acknowledged suicidal ideation (Center for Disease Control, 1991). Suicide remains the second most frequent cause of death in adolescents (Center for Disease Control, 1992). Further, suicidal behavior constitutes one of the most common reasons for inpatient admission to psychiatric facilities nationwide (Strauss et al., 1995). Self-mutilation is a related serious problem affecting up to 10% of adult psychiatric patients (Favazza and Conterio, 1988) and a common behavior in adolescent treatment settings.

Suicide attempts are complex behaviors, and associated risk factors are multidetermined stemming from familial, environmental, biological, psychopathological, and/or sociocultural domains. Although risk factors and precipitants for self-mutilation and suicide attempts might differ, suicidal ideation often precedes a suicide attempt (Andrews and Lewinsohn, 1992). Over the past 10 years, a history of child abuse, in particular sexual abuse, has come to be recognized as an important risk factor for later suicidal behavior, specifically suicide attempts. This association has been documented in both clinical and community populations of children (Lanktree et al., 1991), adolescents (De Wilde et al., 1992; Sansonnet-Hayden et al., 1987; Shaunessy et al., 1993), college students (Peters and Range, 1995; Sedney and Brooks, 1984), and adults (Boudewyn and Liem, 1995; Briere and Runtz, 1986; Briere and Zaidi, 1989). Sansonnett-Hayden et al. (1987) found that 17 sexually abused adolescents were significantly more likely than 37 non-sexually abused psychiatric controls to have made a suicide attempt in the year prior to admission. Comparing 48 adolescent suicide attempters, 66 depressed adolescents, and 43 controls with no depression or suicidality, De Wilde et al. (1992) found that the suicide at-

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tempters, as a group, experienced significantly more family turmoil and sexual abuse in childhood than the depressed or control groups. In a study of 117 hospitalized adolescents, Shaunessy et al. (1993) reported that a history of prior sexual abuse was significantly associated with current suicidal ideation and past number of attempts.

Childhood histories of physical abuse also have been linked to later suicidal behavior in chemically dependent adolescents (Deykin and Buka, 1994), pregnant teenagers (Bayatpour et al., 1992) and in treatment- and nontreatment-seeking high school students (Garnefski et al., 1992). In a study of 300 addicts aged 15 through 19, Deykin and Buka (1994) found that a history of physical abuse was associated with increased risk of suicide attempts for male subjects, whereas studies by Bayatpour and colleagues (1992) in pregnant teenagers and those by Garnefski et al. (1992) in high school students reported that a history of physical abuse posed a risk factor for suicidal behavior in girls.

Less commonly studied forms of maltreatment that potentially may serve as additional risk factors for the development of adolescent suicidal behavior include emotional and physical neglect. Unfortunately, few studies have attempted to measure neglect because lack of emotional or physical care is difficult to characterize and quantify. Of note, several studies have reported a positive relationship between adolescent suicidal behavior and factors that might be viewed as indirect measures of childhood neglect such as family violence and turmoil and being born to a teenage mother (Dubow et al., 1989; Lewinsohn et al., 1994; Shagle and Barber, 1995). Perhaps the most direct measure of neglect (defined as disruptions in parental emotional or physical care) comes from work by Van der Kolk and colleagues (1991) in adult female borderline individuals where neglect was found to be an important predictor of continued self-destructive behavior, both suicide attempts and self-mutilation, over a 4-year period.

Although it is clear that various types of childhood abuse, and possibly neglect, are related to various types of later suicidal behavior, little is known about the relative importance of these childhood experiences. Until recently there have been no standardized (in terms of reliability and validity) instruments to assess neglect and no instruments to assess both abuse and neglect in the same person. In a recent review of the methodological problems encountered in child maltreatment research, Kinard (1994) notes that researchers and clinicians have difficulties classifying multiple forms of maltreatment. When sexual abuse and neglect have occurred together, as they often do, children tend to be classified as sexually abused.

The purpose of the present study was to investigate the relationship between adolescent suicidal behavior and five types of childhood abuse and neglect. To measure aspects of childhood maltreatment, we used a recently developed instrument, the Childhood Trauma Questionnaire (CTQ), which was constructed using clear, operationalized definitions of abuse and neglect (Bernstein et al., 1994). The CTQ measures five constructs of maltreatment. They include sexual, physical, and emotional abuse as well as physical and emotional neglect. Each of these constructs was analyzed separately and together, as a group, to determine their independent as well as relative contributions to adolescent suicidal behavior (suicide attempts and suicidal ideation) as well as self-mutilation.

Methods

Subjects

Participants were consecutive admissions over a 1-year period to an acute adolescent inpatient unit in a state facility for children and adolescents. Patients with histories of significant head injuries, pervasive developmental disorders, or a diagnosis of mental retardation (IQ < 70) were excluded from this study. Both subjects and their parent/legal guardian gave written, informed consent for the interviews. Of a total of 143 admissions, 12 subjects were excluded, 39 subjects, and/or their guardians declined participation in the study and 18 patients were discharged prior to enrollment. Seventy-one subjects consented to the testing and were enrolled in the study during the 2nd week of their hospitalization. The sample consisted of 34 (47.8%) boys and 37 (52.2%) girls with a mean age of 14.8, SD = 1.6 years (range 12.1 to 18.0 years) and a mean educational level of the 8th grade. Forty-eight percent of the sample were Latinos, 42% were African-American, 5% were Caucasian, and 5% were of other ethnicities. Religious affiliations of the subjects included 53% Catholic, 26% Protestant, 3% Jewish, and 25% other faiths. Marital status of the subject's parents were as follows: 17% were married, 35% were divorced or separated, 34% were single parents, and 14% were widowed. Forty-eight percent of the sample had parents who received public assistance. There were no significant sociodemographic differences between study participants and nonparticipants.

Psychiatric diagnoses were "best estimate" or consensus diagnoses based on the revised version of the Diagnostic Interview for Children and Ado-

lescents (DICA-R: Welner et al., 1987), clinician based DSM-III-R diagnoses formulated during multidisciplinary treatment teams and data from medical records. Sixty-two percent of the subjects met criteria for at least one disruptive behavior disorder (29.7% attention deficit hyperactivity disorder, 50% oppositional defiant disorder, and 29.7% conduct disorder). The prevalence of a current episode of major depression was 32.1% and of a past episode 14.2%. Thirteen subjects met criteria for a diagnosis of alcohol abuse; 21% of subjects were diagnosed with a psychotic disorder (including schizophrenia, schizoaffective disorder, or psychosis NOS).

Maltreatment Measures

The Childhood Trauma Questionnaire (CTQ; Bernstein et al., 1994) is a 70-item, screening inventory that assesses self-reported experiences of abuse and neglect in childhood and adolescence. The CTQ operationalizes maltreatment as follows: Physical abuse is defined as an assault to a child or minor by an adult caretaker that poses a risk of injury or bodily harm. Examples include beating a child with an object, punching, or kicking a child. Sexual abuse is defined as sexual contact between a child or minor (under age 18) and an adult 5 years older or a peer or sibling at least 2 years older. Emotional abuse is defined as verbal assaults on a child's sense of self-worth or humiliating and derogatory behavior directed toward the child by an adult. Physical neglect is defined as the failure of caretakers to provide for a child's basic physical needs such as food, clothing, shelter, or safety. Emotional neglect is defined as the failure of caretakers to provide for a child's basic psychological or emotional needs such as love, encouragement, belonging, and support. Items are rated on a 5-point Likert scale with responses that range from "never true" to "very often true." A principle components analysis of the CTQ in an adolescent psychiatric population yielded five rotated factors (emotional abuse, emotional neglect, sexual abuse, physical abuse, and physical neglect) that all had moderate to high internal consistency with alpha Cronbach coefficients ranging from .81 to .95. Cut scores were created for each of the five factors that show excellent sensitivity and specificity in correctly classifying cases of abuse and neglect (Bernstein et al., 1997).

The Traumatic Events Questionnaire-Adolescent Version (TEQ-A; Lipschitz et al., 1996b) is a 46-item, self-report questionnaire that uses a direct answer format to elicit details about six types of traumatic experiences. They include witnessing home violence, witnessing or being the victim of community violence, accidental physical injuries, and physical and sexual abuse. Abuse specifics such as the age of onset, duration, identity of perpetrator(s), and exact nature of each traumatic experience are obtained. Test-retest reliability over 3 months for the subscales of physical abuse and sexual abuse on an adult version of the TEQ were $r = .94$ and $r = .92$, respectively (Lipschitz et al., 1996a). As a measure of criterion validity, adolescent subjects' responses to items about sexual abuse on the TEQ-A showed an 88% rate of agreement with a "best estimate" source, based on information about the sexual abuse from the therapist, the chart and child protective agencies (kappa = .75). Adolescent responses to items of physical abuse on the TEQ-A showed an 83% rate of agreement with a "best estimate" source (kappa = .65; Winegar and Lipschitz, 1997).

Suicide Measures

This study examined three types of suicidal behavior: suicide attempts, self-mutilation, and current suicidal ideation. Suicide attempts, defined as self-injury with the intent to die, were recorded from 12 questions on the TEQ-A and later corroborated by clinician interview and chart review. Details included the number of attempts, age(s) at time of each attempt, methods used, and precipitants. In addition, details of self-mutilation, defined as self-injury without an intent to die, but rather to inflict pain, were also recorded. Examples of self-mutilation include cutting, scratching, burning, or slashing. Subjects were asked about types of self-mutilation, frequency of the behavior, age(s) at the time, and precipitants for the behavior. This study did not assess other examples of self-injurious behavior such as bingeing, compulsive overspending, shoplifting, or engaging in unprotected sex. Subjects also completed the Suicidal Ideation Questionnaire (SIQ-JR), a 15-item, self-report measure of both passive and active suicidal ideation in the past week (Reynolds, 1987). Responses to items are graded 0 to 6 using a Likert scale format. Coefficient alpha internal consistency is excellent at .97, and norms have been established on over 2000 adolescents. A cut score of 31 indicates significant suicidal ideation.

Results

Validated cut scores established for an inpatient adolescent population were used to delineate the prevalence of sexual, physical, and emotional abuse and emotional and physical neglect. According to these cut scores (12 for sexual abuse and 14 for physical abuse), the prevalence of sexual abuse and

TABLE 1
CTQ Factor Scores of 71 Adolescent Inpatients for Overall Sample and by Gender

	Total Subjects (N=71)		Girls (N=37)		Boys (N=34)	
CTQ Factor	Mean	(SD)	Mean	(SD)	Mean	(SD)
Sexual abuse	13.77	(8.99)	15.51	(9.80)	11.81	(7.65)[a]
Physical abuse	15.43	(8.46)	16.05	(8.30)	14.73	(8.72)
Emotional abuse	34.86	(15.35)	36.65	(14.38)	32.84	(16.35)
Physical neglect	16.13	(6.40)	15.84	(5.96)	16.45	(6.95)
Emotional neglect	42.83	(15.81)	46.43	(17.51)	38.79	(12.73)[b]

[a] Girls *vs.* boys, $t = 1.72$, $df = 70$, $p = .08$.
[b] Girls *vs.* boys, $t = 2.07$, $df = 70$, $p = .04$.

physical abuse was 37.5% and 43.7%, respectively. Using a cut score of 30 for emotional abuse, the prevalence of emotional abuse was 51.6%. Using a cut score of 14 for physical neglect, and 50 for emotional neglect, the prevalence of physical and emotional neglect was 61% and 31.3%, respectively. Mean and standard deviations for each of the five factors for the overall sample and by gender are displayed in Table 1.

Characteristic features of the sexual abuse obtained from responses to the TEQ-A were as follows: The mean age of abuse onset was 8.0 ± 4.2 years, a mean duration of 2.1 ± 3.8 years with a mean time interval of 4.8 ± 4.0 years elapsed since the last occurrence. Seventy-six percent ($N = 25$) of cases involved penetration or oral sex, 88% ($N = 29$) of cases involved genital contact, and 91% ($N = 32$) of cases involved kissing or fondling of breasts. Methods of coercion included the use of threats and bribes (61%) and physical force (48.5%). Three subjects reported physical injury at the time of abuse. Thirty-one of the perpetrators were adults, five were adolescents, and three perpetrators were younger than their victims. Twenty-five of the respondents had a single perpetrator, and 11 youngsters had at least two perpetrators. The majority of the perpetrators were intrafamilial (fathers, stepfathers, uncles, brothers, and grandfathers).

Characteristic features of the physical abuse included the following: A mean age of onset of 4.4 ± 3.8 years, a mean duration of 6.4 ± 4.4 years, and a mean time interval of 4.7 ± 4.4 years since the last occurrence; 73% ($N = 24$) of respondents sustained physical injuries from the abuse, and 24% ($N = 8$) received medical attention. Sixteen youngsters reported experiences of both sexual and physical abuse.

Fifty-one percent ($N = 36$) of adolescents had made at least one lifetime suicide attempt, and in 50% of cases, the suicidality (ideation, plan, or attempt) was the primary reason for current inpatient admission. The mean number of lifetime attempts made was 1.61 (range 1 to 9), and an overdose was the most common method of attempt. The mean age at the time of the earliest attempt was 10.5 ± 3.6 years, and the mean age of their most recent attempt was 12.5 ± 2.6 years. Thirty-nine percent ($N = 28$) of adolescents reported self-mutilation. Forty-six percent of the self-mutilators reported their behavior occurring within the previous year, and cutting was the most common form. Youngsters who had made suicide attempts were also significantly more likely to report self-mutilation. (61% *vs.* 38%, $\chi^2 = 12.04$, $df = 1$, $p = .001$). On the Suicide Inventory Questionnaire (SIQ), youngsters scored a mean of 30.1, SD = 3.2 (indicative of a high level of current ideation). SIQ scores were significantly correlated with the number of previous suicide attempts ($r = .53$, $df = 60$, $p < .001$), and scores on the SIQ differed significantly among the suicidal and nonsuicidal group ($t = 4.47$, $df = 60$, $p < .001$). Tables 2 and 3 reflect demographic and family type differences between the 36 suicidal and 35 nonsuicidal youngsters.

Suicide attempters were significantly more likely to be girls than boys ($p < .001$) and Latino than African American ($p = .006$). Experiences of sexual, physical, and emotional abuse were significantly

TABLE 2
Sociodemographic Differences in Adolescent Suicide Attempters (N=36) and Psychiatric Controls (N=35): Categorical Variables

	Suicide Attempters		Non-attempters		
Characteristic	*N*	(%)	*N*	(%)	χ^2
Gender					
Males	8	(22.2)	26	(74.3)	19.26***
Females	28	(77.9)	9	(25.7)	
Ethnicity[a]					
Caucasian	2	(5.5)	4	(11.4)	12.05**
African-American	11	(30.6)	20	(57.1)	
Latino	23	(63.9)	11	(31.1)	
Parental marital status					
Single	14	(38.9)	10	(28.6)	1.22
Married	7	(19.4)	5	(14.3)	
Separated	12	(33.3)	13	(37.1)	
Widowed	3	(8.3)	7	(20.0)	
Family composition					
Single parent	10	(27.8)	15	(42.8)	3.26
Two biological parents	5	(13.4)	5	(14.2)	
Parent and step parent/lover	7	(19.4)	4	(11.4)	
Extended family	5	(13.9)	7	(20.0)	
Foster home/residential	9	(25.0)	4	(11.4)	

[a] Tukey post hoc analyses show significance accounted for by Latinos compared to African-American ($\chi^2 = 7.51$, $df = 1$, $p = .006$) and Latino compared with Caucasian (Fisher exact test = 5.49, $df = 1$, $p = .02$).
** $p < .01$; *** $p < .001$.

TABLE 3
Sociodemographic and Maltreatment Differences in Adolescent Suicide Attempters (N=36) and Psychiatric Controls (N=35): Continuous Variables

	Suicide Attempters		Nonattempters		
	Mean	(SD)	Mean	(SD)	*t* Statistic
Age (yr)	14.80	(1.80)	14.50	(1.60)	.14
Grade (mean)	8.20	(1.60)	8.50	(1.80)	.83
Sexual abuse	17.31	(9.64)	10.28	(7.04)	3.39***
Physical abuse	18.17	(8.33)	12.59	(8.06)	2.78**
Emotional abuse	39.69	(16.10)	29.84	(13.65)	2.69**
Physical neglect	16.89	(6.31)	15.28	(6.62)	1.00
Emotional neglect	49.08	(17.12)	36.69	(11.46)	3.45***

**$p < .01$; ***$p < .001$.

TABLE 4
Logistic Regression Analyses of Childhood Trauma Questionnaire Variables of Abuse and Neglect as Predictors of Adolescent Suicide Attempts and Self-Mutilation

	Suicide Attempt (N=36)		Self-Mutilation (N=28)	
Predictor	Estimate	SE	Estimate	SE
Sexual abuse	.09**	.04	.01**	.04
Physical abuse	.06	.06	.05	.07
Emotional abuse	.002	.04	.01	.04
Physical neglect	.08	.07	.13	.07
Emotional neglect	.05*	.02	.08**	.03

*$p < .05$; **$p < .01$.

more common among the suicide attempters. Attempters reported significantly more emotional neglect ($p = .001$) but not more physical neglect than nonattempters. Similar group comparisons were made between the self-mutilator group ($N = 28$) and a control group without this behavior ($N = 43$). Sexual abuse ($p = .02$), physical abuse ($p = .03$), emotional abuse ($p = .04$), and emotional neglect ($p < .001$) were significantly higher in the group of self-mutilators; however, there was no significant differences in physical neglect ($t = 2.59$, $df = 64$, $p =$ NS). Girls were also significantly more likely to self-mutilate than boys ($p < .001$); however, there were no significant differences in ethnicity ($\chi^2 = 7.87$, $df = 2$, $p =$ NS).

We used multiple regression analyses models to assess the predictive value of a history of each form of abuse and neglect on suicidal behavior. For the dichotomous dependent outcome variables of suicide attempt status and self-mutilation status, all CTQ factors were simultaneously entered into a logistic regression equation (Table 4).

Of the five risk factors, only sexual abuse and emotional neglect were significant predictors of a suicide attempt ($\chi^2 = 5.76$, estimate = .09, $p = .01$; $\chi^2 = 4.17$, estimate = .05, $p = .04$) and of self-mutilation ($\chi^2 = 6.53$, estimate = .01, $p = .01$; $\chi^2 = 7.93$, estimate = .08, $p = .005$). A simultaneous entry linear regression analysis of the five CTQ factors was used to assess the relative and cumulative contributions of neglect and abuse to suicidal ideation. The overall model was significant ($F = 9.1$, $R^2 = .46$, $p < .001$). Sexual abuse ($t = 3.07$, $p = .003$) and emotional neglect ($t = 2.93$, $p = .004$) were significant predictors of suicidal ideation, accounting for 46% of the variance.

In the univariate analyses, girls were significantly more likely than boys to have made a suicide attempt. They also report significantly more emotional neglect (see Table 1). To remove the potentially confounding variable of gender, the regression analyses were run adding gender to the models. In the logistic regression models female gender and sexual abuse remained significant predictors of suicide attempts ($\chi^2 = 9.98$, estimate = 2.19, $p = .001$; $\chi^2 = 3.94$, estimate = .08, $p = .05$), respectively, and female gender, sexual abuse, and emotional neglect remained significant predictors of self-mutilation ($\chi^2 = 6.41$, estimate = 1.73, $p = .01$; $\chi^2 = 4.74$, estimate = .09, $p = .03$; $\chi^2 = 5.87$, estimate = .07, $p = .01$, respectively). When gender was forced into the linear regression model for suicidal ideation, the overall model remained significant ($F = 8.59$, $R^2 = .49$, $p < .001$). Significant predictors of suicidal ideation were female gender ($t = 1.93$, $p = .05$), sexual abuse ($t = 2.80$, $p = .007$), and emotional abuse ($t = 2.38$, $p = .02$).

Discussion

In the current study, using multivariate analyses, childhood sexual abuse, and emotional neglect were significantly associated with adolescent self-mutilation and suicidal ideation. A history of childhood sexual abuse was significantly associated with a lifetime suicide attempt. This was not the case for physical abuse, emotional abuse, and physical neglect. Although the data regarding sexual abuse was in agreement with previous research about suicide attempts (Briere and Runtz, 1986; Briere and Zaidi, 1989; Lanktree et al., 1991; Peters and Range, 1995, Sedney and Brooks, 1984), the finding that emotional neglect was more strongly associated with suicidal ideation and self-mutilation than physical abuse or neglect was somewhat unexpected.

Neglect is generally assumed to be less harmful or detrimental to children than physical or sexual abuse perhaps because the consequences are not as overt or obvious. However, the current data suggest that emotional neglect may be as important as experiences of abuse in influencing later self-destructive behavior. To date, sexual abuse and physical

abuse have been the most commonly cited childhood maltreatment risk factors for suicidal behavior. By comparison, the effects of emotional neglect has received relatively little empirical attention. Yet neglect represents over half of the identified cases of child maltreatment reported to child protective services nationwide (U.S. Dept. of Health, 1988). In our data set of inpatient adolescents, 31% of them report instances of emotional neglect.

Research with nonhuman primates and human infants has clearly shown that maternal separations and caretaker neglect can have devastating effects on social, psychological, and biological growth and well-being. Rhesus monkeys separated from their mothers at critical stages of development or who are subject to marked social deprivation respond with protest and despair that persists into adulthood (Suomi et al., 1975). These emotionally neglected monkeys become socially withdrawn and unpredictably aggressive. As adults, they demonstrate self-destructive and self-stimulating behavior such as biting, self-sucking, and huddling (Harlow and Harlow, 1971; Sackett, 1965). Macaques that are separated from their mothers at an early age also tend to develop self-destructive behaviors. When returned to their mothers these behaviors decrease in frequency (Anderson and Chamove, 1985). In humans, Spitz (1945) described stages of protest and despair in socially deprived or neglected institutionalized infants. Using the Strange Situation Paradigm of Ainsworth and Wittig (1969), human infant researchers have described atypical or insecure attachments in maltreated children (Carlson et al., 1989; Crittenden, 1988). An example is the "type D" pattern of infant attachment entitled "disorganized/disorientated" found in maltreated infants and toddlers (Main and Solomon, 1990). Barnett and colleagues (1992) reported that type D attachment pattern is stable from 12 to 24 months. Other researchers have applied attachment theory to the study of the long-term effects of childhood sexual abuse in adult women (Alexander, 1992). They report impaired adult attachments in adult survivors of childhood sexual abuse. We did not assess patterns of parental or peer attachment in our subjects, but these would be important constructs to assess in future studies, especially if these relationships mediate later self-destructive behavior.

This study differentiated between physical neglect and emotional neglect. Physical neglect was not associated with later suicidal attempts, ideation, or self-mutilation. In contrast, emotional neglect was significantly associated with later suicidal behavior. The relationship was strongest for suicidal ideation and self-mutilation. Of note, this relationship was significant over and above associations between sexual abuse and suicidal behavior. These findings suggest that failure to provide adequate food, shelter, and clothing does not have as great an impact on later suicidal behavior as failure by caretakers to love, encourage, and support their children.

Emotional neglect has been associated with poor self-esteem in preschool children (Egeland et al., 1983) and poor academic performance in school age children (Eckenrode et al., 1993; Vondra et al., 1989). Comparing 420 maltreated children with 420 controls, Eckenrode and colleagues (1993) noted that neglect, occurring alone, or in combination with abuse was associated with the lowest level of academic performance. It may be that emotional neglect contributes to poor self-esteem and poor academic performance which, in turn, may be another mediator of self-destructive behavior in adolescence.

This study was conducted in an inpatient setting with a high-risk population of adolescents who had multiple emotional and behavioral problems. Seventy-five percent of the sample reported at least one form of maltreatment and 51% of the sample had made a suicide attempt(s). This study was conducted in a hospital that was located in a predominantly Hispanic and African-American neighborhood. Therefore, 90% of the sample were of ethnic minorities with 48% of the sample of Latino (Puerto Rican) origin. The psychopathological severity and unique sociodemographic composition of our sample may limit the generalizability of our results to other clinical settings and therefore, it will be important to replicate our findings in other clinical and nonclinical populations. However, this study also highlights some important cultural differences in adolescent suicidality that deserve further exploration. For example, Latinos were more likely to have made a suicide attempt but no more likely to engage in self-mutilation than African-American adolescents.

This study utilizes an instrument, the Childhood Trauma Questionnaire, with subscales that have normative values to assess the constructs of abuse and neglect. The scale's format allows for increased statistical power when examining the effects of abuse and neglect in multivariate analyses. However, there were also significant intercorrelations between the factors of abuse and neglect, thus weakening a multivariate model. Despite our small sample size, certain types of maltreatment, namely sexual abuse and emotional neglect, remained significant predictors of suicidal ideation and self-mutilation, implying that there is a moderate to large effect size. Furthermore, a recent study found that

despite significant intercorrelations between the CTQ subscales, they showed good evidence of discriminant validity (Bernstein et al., 1997). Finally, this study remains self-report and retrospective in nature, and we are unable to provide details about the timing or sequence of abuse and neglect and later suicidal behavior. Answers to these questions lie in retrospective studies.

Despite these limitations, the present findings highlight the importance of emotional neglect as a risk factor for suicidal behavior in adolescents. In recent years clinicians have become increasingly vigilant about the sequelae of childhood sexual and physical abuse; however, other aspects of childhood maltreatment such as emotional neglect require further empirical attention. Experiences of neglect can form a context in which abuse occurs and can be linked closely with various forms of later self-destructive behavior, such as suicidal ideation, suicide attempts, and self-mutilation.

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